# RAW SEQUENCE LISTING

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Application Serial Number: _09/674, 8170_

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Date Processed by STIC: _4/22/05_

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IFW16

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 4 <110> APPLICANT: LORZ, HORST
 5         LUTTICKE, STEPHANIE
 6         ABEL, GERNOT
 7         GENSCHEL, ULRICH
 9 <120> TITLE OF INVENTION: NUCLEIC ACID MOLECULES WHICH CODE FOR ENZYMES
10         DERIVED FROM WHEAT AND WHICH ARE INVOLVED IN
11         THE SYNTHESIS OF STARCH
13 <130> FILE REFERENCE: 514413-3849.1
15 <140> CURRENT APPLICATION NUMBER: 09/674,817D
16 <141> CURRENT FILING DATE: 2000-11-06
18 <150> PRIOR APPLICATION NUMBER: WO 99/58690
19 <151> PRIOR FILING DATE: 1999-11-18
21 <150> PRIOR APPLICATION NUMBER: DE 198 20 608.9
22 <151> PRIOR FILING DATE: 1998-05-08
24 <160> NUMBER OF SEQ ID NOS: 11
26 <170> SOFTWARE: PatentIn version 3.3
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48    1               5                   10                  15
50 gcg ggg aag ggg gtc ggc gag gtg tgc gcc gcg gtt gtc gag gcg gcg         95
51 Ala Gly Lys Gly Val Gly Glu Val Cys Ala Ala Val Val Glu Ala Ala
52                 20                  25                  30
54 acg aag gta gag gac gag ggg gag gag gac gag ccg gtg gcg gag gac        143
55 Thr Lys Val Glu Asp Glu Gly Glu Glu Asp Glu Pro Val Ala Glu Asp
56                 35                  40                  45
58 agg tac gcg ctc ggc ggc gcg tgc agg gtg ctc gcc gga atg ccc gcg        191
59 Arg Tyr Ala Leu Gly Gly Ala Cys Arg Val Leu Ala Gly Met Pro Ala
60             50                  55                  60
62 ccg ctg ggc gcc acc gcg ctc gcc ggc ggg gtc aat ttc gcc gtc tat        239
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63 Pro Leu Gly Ala Thr Ala Leu Ala Gly Gly Val Asn Phe Ala Val Tyr
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66 tcc ggc gga gcc acc gcc gcg gcg ctc tgc ctc ttc acg cca gaa gat      287
67 Ser Gly Gly Ala Thr Ala Ala Ala Leu Cys Leu Phe Thr Pro Glu Asp
68 80                  85                  90                  95
70 ctc aag gcg gtggggttgc ctcccgagta gagttcatca gctttgcgtg              336
71 Leu Lys Ala
74 cgccgcgcgc ccctttttttg ggcctgcaat ttaagttttg tactggggca aatgctgcag  396
76 gat agg gtg acc gag gag gtt ccc ctt gac ccc ctg atg aat cgg acc      444
77 Asp Arg Val Thr Glu Glu Val Pro Leu Asp Pro Leu Met Asn Arg Thr
78      100                 105                 110
80 ggg aac gtg tgg cat gtc ttc atc gaa ggc gag ctg cac aac atg ctt      492
81 Gly Asn Val Trp His Val Phe Ile Glu Gly Glu Leu His Asn Met Leu
82 115                 120                 125                 130
84 tac ggg tac agg ttc gac ggc acc ttt gct cct cac tgc ggg cac tac      540
85 Tyr Gly Tyr Arg Phe Asp Gly Thr Phe Ala Pro His Cys Gly His Tyr
86                  135                 140                 145
88 ctt gat gtt tcc aat gtc gtg gtg gat cct tat gct aag gca gtg ata      588
89 Leu Asp Val Ser Asn Val Val Val Asp Pro Tyr Ala Lys Ala Val Ile
90                  150                 155                 160
92 agc cga ggg gag tat ggt gtt cca gcg cgt ggt aac aat tgc tgg cct      636
93 Ser Arg Gly Glu Tyr Gly Val Pro Ala Arg Gly Asn Asn Cys Trp Pro
94      165                 170                 175
96 cag atg gct ggc atg atc cct ctt cca tat agc acg ttt gat tgg gaa      684
97 Gln Met Ala Gly Met Ile Pro Leu Pro Tyr Ser Thr Phe Asp Trp Glu
98      180                 185                 190
100 ggc gac cta cct cta aga tat cct caa aag gac ctg gta ata tat gag     732
101 Gly Asp Leu Pro Leu Arg Tyr Pro Gln Lys Asp Leu Val Ile Tyr Glu
102 195                 200                 205                 210
104 atg cac ttg cgt gga ttc acg aag cat gat tca agc aat gta gaa cat     780
105 Met His Leu Arg Gly Phe Thr Lys His Asp Ser Ser Asn Val Glu His
106                 215                 220                 225
108 ccg ggt act ttc att gga gct gtg tcg aag ctt gac tat ttg aag gag     828
109 Pro Gly Thr Phe Ile Gly Ala Val Ser Lys Leu Asp Tyr Leu Lys Glu
110                 230                 235                 240
112 ctt gga gtt aat tgt att gaa tta atg ccc tgc cat gag ttc aac gag     876
113 Leu Gly Val Asn Cys Ile Glu Leu Met Pro Cys His Glu Phe Asn Glu
114         245                 250                 255
116 ctg gag tac tca acc tct tct tcc aag atg aac ttt tgg gga tat tct     924
117 Leu Glu Tyr Ser Thr Ser Ser Ser Lys Met Asn Phe Trp Gly Tyr Ser
118     260                 265                 270
120 acc ata aac ttc ttt tca cca atg aca aga tac aca tca ggc ggg ata     972
121 Thr Ile Asn Phe Phe Ser Pro Met Thr Arg Tyr Thr Ser Gly Gly Ile
122 275                 280                 285                 290
124 aaa aac tgt ggg cgt gat gcc ata aat gag ttc aaa act ttt gta aga     1020
125 Lys Asn Cys Gly Arg Asp Ala Ile Asn Glu Phe Lys Thr Phe Val Arg
126                 295                 300                 305
128 gag gct cac aaa cgg gga att gag gtg atc ctg gat gtt gtc ttc aac     1068
129 Glu Ala His Lys Arg Gly Ile Glu Val Ile Leu Asp Val Val Phe Asn
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132 cat aca gct gag ggt aat gag aat ggt cca ata tta tca ttt aag ggg      1116
133 His Thr Ala Glu Gly Asn Glu Asn Gly Pro Ile Leu Ser Phe Lys Gly
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136 gtc gat aat act aca tac tat atg ctt gca ccc aag gga gag ttt tat      1164
137 Val Asp Asn Thr Thr Tyr Tyr Met Leu Ala Pro Lys Gly Glu Phe Tyr
138         340              345              350
140 aac tat tct ggc tgt ggg aat acc ttc aac tgt aat cat cct gtg gtt      1212
141 Asn Tyr Ser Gly Cys Gly Asn Thr Phe Asn Cys Asn His Pro Val Val
142 355              360              365              370
144 cgt caa ttc att gta gat tgt tta aga tac tgg gtg acg gaa atg cat      1260
145 Arg Gln Phe Ile Val Asp Cys Leu Arg Tyr Trp Val Thr Glu Met His
146              375              380              385
148 gtt gat ggt ttt cgt ttt gat ctt gca tcc ata atg acc aga ggt tcc      1308
149 Val Asp Gly Phe Arg Phe Asp Leu Ala Ser Ile Met Thr Arg Gly Ser
150         390              395              400
152 agt ctg tgg gat cca gtt aac gtg tat gga gct cca ata gaa ggt gac      1356
153 Ser Leu Trp Asp Pro Val Asn Val Tyr Gly Ala Pro Ile Glu Gly Asp
154         405              410              415
156 atg atc aca aca ggg aca cct ctt gtt act cca cca ctt att gac atg      1404
157 Met Ile Thr Thr Gly Thr Pro Leu Val Thr Pro Pro Leu Ile Asp Met
158         420              425              430
160 atc agc aat gac cca att ctt gga ggc gtc aag ctc att gct gaa gca      1452
161 Ile Ser Asn Asp Pro Ile Leu Gly Gly Val Lys Leu Ile Ala Glu Ala
162 435              440              445              450
164 tgg gat gca gga ggc ctc tat caa gta ggt caa ttc cct cac tgg aat      1500
165 Trp Asp Ala Gly Gly Leu Tyr Gln Val Gly Gln Phe Pro His Trp Asn
166              455              460              465
168 gtt tgg tct gag tgg aat ggg aag tac cgg gac att gtg cgt caa ttc      1548
169 Val Trp Ser Glu Trp Asn Gly Lys Tyr Arg Asp Ile Val Arg Gln Phe
170         470              475              480
172 att aaa ggc act gat gga ttt gct ggt ggt ttt gcc gaa tgt ctt tgt      1596
173 Ile Lys Gly Thr Asp Gly Phe Ala Gly Gly Phe Ala Glu Cys Leu Cys
174         485              490              495
176 gga agt cca cac cta tac cag gtaagttgtg gcaatacttg taaatgagtt      1647
177 Gly Ser Pro His Leu Tyr Gln
178         500              505
180 gagtgaatgt cacctggatt ttttatatat accacatgat gatacacatc taaatatata  1707
182 acaatcatag tgtatgcata tgcatttggc taagaagtat tagtgtatac actagtgcta  1767
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194 caaatttcta tttggtttct ctagaaatca aaccagtaac ttgttattgg cactgcaact  2127
196 tcttattgat taatcag gca gga gga agg aaa cct tgg cac agt atc aac      2177
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205 Asn Lys Lys Tyr Asn Leu Pro Asn Gly Glu Asn Asn Arg Asp Gly Glu
206           535               540               545
208 aat cac aat ctt agc tgg aat tgt ggg gag gaa gga gaa ttc gca aga      2321
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212 ttg tct gtc aaa aga ttg agg aag agg cag atg cgc aat ttc ttt gtt      2369
213 Leu Ser Val Lys Arg Leu Arg Lys Arg Gln Met Arg Asn Phe Phe Val
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220 tat ggc cac aca aaa ggg ggc aac aac aat aca tac tgc cat gat tct      2465
221 Tyr Gly His Thr Lys Gly Gly Asn Asn Asn Thr Tyr Cys His Asp Ser
222           600               605               610
224 tat gtc aat tat ttt cgc tgg gat aaa aaa gaa caa tac tct gag ttg      2513
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232 ctt ggc ctt gag gac ttt cca acg gcc aaa cgg ctg cag tgg cat ggt      2609
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234 645               650               655               660
236 cat cag cct ggg aag cct gat tgg tct gag aat agc cga ttc gtt gcc      2657
237 His Gln Pro Gly Lys Pro Asp Trp Ser Glu Asn Ser Arg Phe Val Ala
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249 Arg Trp Glu Pro Val Val Asp Thr Gly Lys Pro Ala Pro Tyr Asp Phe
250     710               715               720
252 ctc acc gac gac tta cct gat cgc gct ctc acc ata cac cag ttc tcg      2849
253 Leu Thr Asp Asp Leu Pro Asp Arg Ala Leu Thr Ile His Gln Phe Ser
254 725               730               735               740
256 cat ttc ctc tac tcc aac ctc tac ccc atg ctc agc tac tca tcg gtc      2897
257 His Phe Leu Tyr Ser Asn Leu Tyr Pro Met Leu Ser Tyr Ser Ser Val
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261 Ile Leu Val Leu Arg Pro Asp Val     Glu Thr Asn Ile Tyr Ser Lys
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